IN THE CLAIMS:

1. (CURRENTLY AMENDED) A squelch circuit comprising:

an audio-removal filter coupled to receive an audio signal, the passband of the audio-removal filter being selected sufficiently high relative to frequency components of the audio signal;

an absolute value detector coupled to the audio-removal filter to supply an output signal having a positive polarity regardless of the polarity of the signal supplied by the audio-removal filter;

an integrating digital filter coupled to receive the output signal from the absolute value detector and supply a~~n~~ first integrated signal during a first mode of operation of the squelch circuit, and a second integrated signal during a second mode of operation of the squelch circuit, the integrating filter ~~having~~ responsive to at least one selectable filter coefficient indicative of ~~the~~ an integration response time of the integrating filter; and

a control module configured to select a first numerical value for the selectable filter coefficient so that during ~~a~~ the first mode of operation of the squelch circuit ~~the~~ a first integration response time of the integrating filter is sufficiently fast to determine the power level of the first integrated signal over a predefined time interval relative to respective squelch thresholds, the control module further configured to select a second numerical value for the selectable filter coefficient so that during ~~a~~ the second mode of operation subsequent to the first mode of operation ~~the~~ a second integration response time of the integrating filter is sufficiently slow relative to the first integration response time of the integrating filter to smooth out power level variations, if any, in the second integrated signal~~due to fading of the audio signal~~.

2. (ORIGINAL) The squelch circuit of claim 1 wherein the integrating filter comprises a recursive filter having a Z-domain transfer function defined by the following equation,

$$H(z) = \frac{1-a}{1-az^{-1}},$$

wherein a is the selectable filter coefficient.

3. (ORIGINAL) A radio receiver configured to operate in a scanning mode including scanning of a priority channel, said radio comprising the squelch circuit of claim 1.

4. (ORIGINAL) The radio receiver of claim 3 wherein, when the radio receiver is commanded to start scan of the priority channel, the value of the filter coefficient is selected to provide a relatively fast integration time.

5. (ORIGINAL) The radio receiver of claim 3 wherein, when the radio receiver is commanded to start scan of the priority channel, the value of the filter coefficient is selected to a value appropriate for performing a relatively fast squelch determination over the predefined time interval.

6. (ORIGINAL) The radio receiver of claim 3 wherein the respective squelch thresholds comprise a first squelch threshold value for determining the presence of an audio signal likely to be intelligible upon comparison with the integrated signal supplied by the integrating filter, and a second squelch threshold value for determining absence of the audio signal upon comparison with the integrated signal supplied by the integrating filter, and wherein the value of the first threshold value is lower relative to the second threshold value.

7. (ORIGINAL) The radio receiver of claim 6 wherein, when the power level of the integrated signal is below the first threshold value upon completion of the predefined time interval, the radio receiver remains on the priority channel, and the value of the filter coefficient is switched to provide a relatively slow integration time.

8. (ORIGINAL) The radio receiver of claim 7 wherein, when the power level of the integrated signal exceeds the second threshold value upon completion of the predefined time interval, the radio receiver leaves the priority channel until a new priority channel scan is performed.

9. (CURRENTLY AMENDED) A method for squelch control in a radio receiver, the method comprising:

filtering an audio signal with a bandpass sufficiently high relative to frequency components of the audio signal;

generating an output signal having a positive polarity regardless of the polarity of the signal obtained through the audio filtering action;

providing a~~n~~ digital integrating filter coupled to receive the positive polarity signal and supply a~~n~~ first integrated signal during a first mode of operation of the squelch circuit, and a second integrated signal during a second mode of operation of the squelch circuit, the integrating filter ~~having~~ responsive to at least one selectable filter coefficient indicative of ~~the~~ an integration response time of the integrating filter;

selecting a first numerical value for the selectable filter coefficient so that during ~~a~~ the first mode of operation ~~the~~ a first integration response time of the integrating filter is sufficiently fast to determine the power level of the first integrated signal over a predefined time interval relative to respective squelch thresholds; and

selecting a second numerical value for the selectable filter coefficient so that during ~~a~~ the second mode of operation subsequent to the first mode of operation, ~~the~~ a second integration response time of the integrating filter is

sufficiently slow to smooth out power level variations, if any, in the second integrated signal~~due to fading of the audio signal~~.

10. (ORIGINAL) The squelch control method of claim 9 wherein the integrating filter comprises a recursive filter having a Z-domain transfer function defined by the following equation,

$$H(z) = \frac{1-a}{1-az^{-1}},$$

wherein a is the selectable filter coefficient.

11. (ORIGINAL) The squelch control method of claim 9 wherein the radio receiver is operable in a scanning mode including scanning of a priority channel.

12. (ORIGINAL) The squelch control method of claim 11 wherein, when the radio receiver is commanded to start scan of the priority channel, the value of the filter coefficient is selected to provide a relatively fast integration time.

13. (ORIGINAL) The squelch control method of claim 11 wherein, when the radio receiver is commanded to start scan of the priority channel, the value of the filter coefficient is selected a value appropriate for performing a fast squelch determination over the predefined time interval.

14. (ORIGINAL) The squelch control method of claim 11 wherein the respective squelch thresholds comprise a first squelch threshold value for determining the presence of an audio signal likely to be intelligible upon comparison with the integrated signal supplied by the integrating filter, and a second squelch threshold value for determining absence of the audio signal upon comparison with the integrated signal supplied by the integrating filter, and

wherein the value of the first threshold value is lower relative to the second threshold value.

15. (ORIGINAL) The squelch control method of claim 14 wherein, when the power level of the integrated signal is below the first threshold value upon completion of the predefined time interval, the radio receiver remains on the priority channel, and the value of the filter coefficient is switched to provide a relatively slow integration time.

16. (ORIGINAL) The squelch control method of claim 15 wherein, when the power level of the integrated signal exceeds the second threshold value upon completion of the predefined time interval, the radio receiver leaves the priority channel until a new priority channel scan is performed.

17. (CURRENTLY AMENDED) A computer-readable medium including instructions causing a computer to control squelch in a radio receiver by:

filtering an audio signal with a bandpass sufficiently high relative to frequency components of the audio signal;

generating an output signal having a positive polarity regardless of the polarity of the signal obtained through the audio filtering action;

configuring a~~n~~ digital integrating filter to receive the positive polarity signal and supply a~~n~~ first integrated signal during a first mode of operation of the squelch circuit, and a second integrated signal during a second mode of operation of the squelch circuit, the integrating filter ~~having~~ responsive to at least one selectable filter coefficient indicative of ~~the~~ an integration response time of the integrating filter;

selecting a first numerical value for the selectable filter coefficient so that during ~~a~~ the first mode of operation ~~the~~ a first integration response time of the integrating filter is sufficiently fast to determine the power level of the first

integrated signal over a predefined time interval relative to respective squelch thresholds; and

selecting a second numerical value for the selectable filter coefficient so that during ~~a~~ the second mode of operation subsequent to the first mode of operation, ~~the~~ a second integration response time of the integrating filter is sufficiently slow to smooth out power level variations, if any, in the second integrated signal~~due to fading of the audio signal~~.

18. (ORIGINAL) The computer-readable medium of claim 17 wherein the integrating filter comprises a recursive filter having a Z-domain transfer function defined by the following equation,

$$H(z) = \frac{1-a}{1-az^{-1}},$$

wherein a is the selectable filter coefficient.

19. (ORIGINAL) The computer-readable medium of claim 17 wherein the radio receiver is operable in a scanning mode including scanning of a priority channel.

20. (ORIGINAL) The computer-readable medium of claim 19 wherein, when the radio receiver is commanded to start scan of the priority channel, the value of the filter coefficient is selected to provide a relatively fast integration time.

21. (ORIGINAL) The computer-readable medium of claim 19 wherein, when the radio receiver is commanded to start scan of the priority channel, the value of the filter coefficient is selected to about 0.990 and the value of the predefined time interval is about 10 msec.

22. (ORIGINAL) The computer-readable medium of claim 19 wherein the respective squelch thresholds comprise a first squelch threshold value for determining the presence of an audio signal likely to be intelligible upon comparison with the integrated signal supplied by the integrating filter, and a second squelch threshold value for determining absence of the audio signal upon comparison with the integrated signal supplied by the integrating filter, and wherein the value of the first threshold value is lower relative to the second threshold value.

23. (ORIGINAL) The computer-readable medium of claim 22 wherein, when the power level of the integrated signal is below the first threshold value upon completion of the predefined time interval, the radio receiver remains on the priority channel, and the value of the filter coefficient is switched to provide a relatively slow integration time.

24. (ORIGINAL) The computer-readable medium of claim 23 wherein, when the power level of the integrated signal exceeds the second threshold value upon completion of the predefined time interval, the radio receiver leaves the priority channel until a new priority channel scan is performed.